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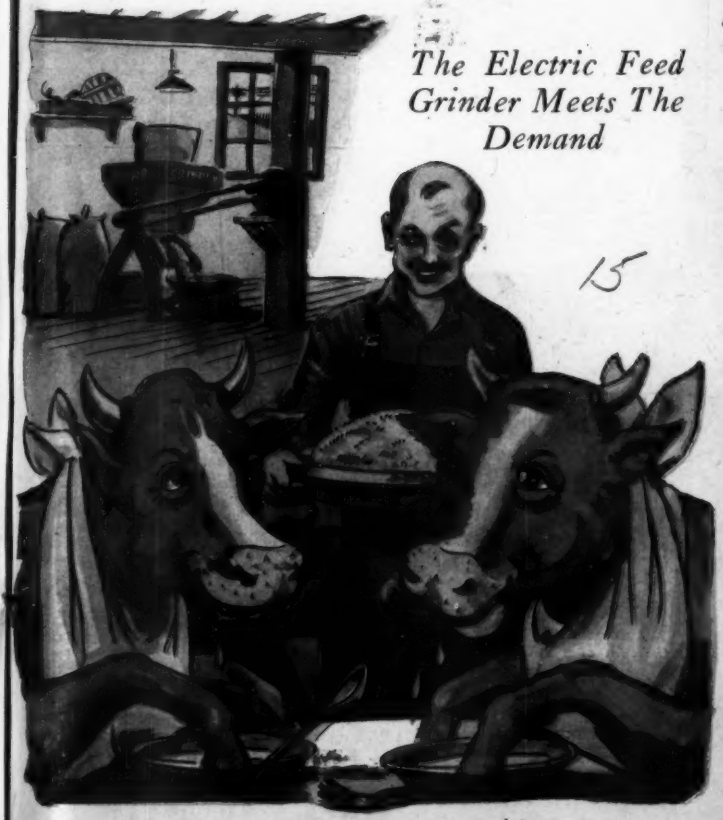
Electricity on the Farm

September 1928



The Electric Feed Grinder Meets The Demand

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And hundreds of thousands of women will tell you a Hotpoint Automatic Electric Range is *fast* and *economical*.

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THERE'S A HOTPOINT ELECTRIC RANGE FOR EVERY PURSE AND PURPOSE

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Self-Oiling Water Systems

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THERE simply is no finer investment for the farm, ranch or suburban estate than an electrically operated *Myers Self-Oiling Water System.* At surprisingly small expense you can obtain service from neighboring power lines—and then with a Myers you are prepared to enjoy that greatest luxury of all the ages—RUNNING WATER.

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Manufacturers for more than 50 years of Myers Pumps for Every Purpose, Hay Tools and Door Hangers.

Electricity on the Farm

Vol. 1 SEPTEMBER, 1928 No. 15

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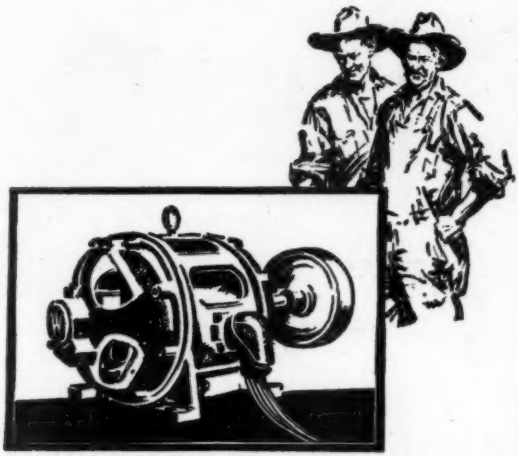

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The heavy jobs—the jobs that strain your muscles and tire you out—can be done more quickly, more efficiently and more *cheaply* with a Westinghouse motor. The motor's cost of operation is small; it is never tired; it does your heaviest work at a minimum wage.

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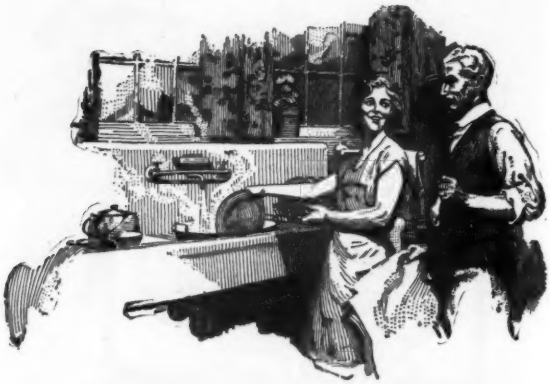


All the Hot Water You Need!

EVEN for the great convenience of having plenty of hot water, it was not much fun to keep a roaring fire going on a summer's day.

But summer is the very season when dishes and cooking and milking utensils *must* be kept immaculately clean. And at the end of a hot day, there's nothing so refreshing as a warm bath.

Throughout the year, an electric water heater furnishes plenty of hot water, and the kitchen remains cool. This is just one way in which electric equipment is making life easier on the farm.

Tune in on WGY (Schenectady) KOA (Denver) KGO (Oakland) for the General Electric Weekly Farm Program.

Ask Your Power Company

If your farm is on or near an electric power line, ask the power company for a copy of the new G-E Farm Book which explains more than 100 uses for electricity on the farm.

GENERAL ELECTRIC

Electricity on the Farm

Vol. 1 SEPTEMBER 1928 No. 15

Saving Money in Grinding Feed

Feed grinding on the farm with electric power has come to stay. Not only does it represent a saving in the cost of grinding over that charged by custom grinders, but as built at present, small electrically driven grinders entail very little work on the part of the farmer. With the advent of the full automatic grinder, equipped to start and stop at pre-arranged times, and protected against running empty, grinding feed on the farm became simplified, indeed.

Several very excellent grinders are now available, operating with less than 5 H.P., which is a distinct advantage from the standpoint of "connected load"; and feed grinding operations may be carried on late in the evening during the periods of off-peak power station loads. The small connected load and the use of off-peak current have, in many instances, a very definite bearing on the reduced cost of current.

Home grinding of feed means cheaper feed, fresher feed, elimination of inconvenience and labor in hauling feed to and from custom grinders.

Electric feed grinding has established a permanent place for itself on the modern, electrified farm.

Mr. H. S. Stauffacher's Arrangement of Motor, Mill, Spouts and Carrier Saves Much Time and Labor in Feeding.

The Daily Grind Made Easy

By E. R. MEACHAM

"IF YOU want to see the slickest feed grinding outfit in this part of the country, go out to the Stauffacher farm," said a friend of mine the other day.

"That would be worth seeing, all right. Where is it?" I asked.

"About a mile northwest of Monroe on the concrete," he answered. "You can't miss it. Turn in just where the concrete curves up a hill; the buildings are set back from the road."

I found it easily enough. Mr. Stauffacher himself was in the yard and met me as I stepped from the car.

"My feed grinder's a dandy," he said when I told him my errand. "I'll be glad to show it to you."

He led the way to the big white dairy barn, and stopped in the doorway to let me pass.

"You see we set the mill up right in the feed alley," he said, following me in. "It's handy here."

A compact, solid looking mill stood under the last of the row of windows at my right. A J-shaped pipe of galvanized iron curved from the bottom of the mill to a cast iron doughnut bolted to the side opposite the pulley. A straight pipe 4 inches in diameter rose from this and passed through the ceiling.

"Hammer mill, isn't it?" I said.

"Yes," he answered. "A hammer mill with a blower to carry the ground feed upstairs."

The mill was belted to a 5 H.P. portable motor set on a two wheeled truck. The belt was next the wall and out of the way.

"There is less work to the whole grinding job now than there used to be in just sacking and loading the grain to haul it to the mill, or even in emptying the sacks of ground feed into the bins after they came back," said Mr. Stauffacher.

"Now wait a minute," I interrupted. "Let's begin at the beginning and see the whole process."

"All right," he said good naturedly. "At threshing time we drive the grain wagons up onto the haymow floor and fill the bin partitioned off along the side. This chute," pointing to the one over the mill, "comes from that bin. Pulling this slide lets the grain flow into the hopper."

Ground Feed Blown to Bin

"As the feed is ground," he went on, "it drops into the pipe fastened to the bottom of the mill. Then the blower picks it up and sends it back up stairs to the second bin."

"That blower seems to be just the thing for this arrangement," I said.

"Yes, we want our mill down here under the grain bins, but we want our ground feed upstairs out of the way, too."

Gravity brings the meal back down again as it is needed. It drops through a second chute directly into a feed carrier hung on an overhead track running the full length of the feed alley.

"We open the chute, fill the carrier, and then push it along so we can shovel out each cow's portion without carrying the grain at all. Putting the grain in the mangers is all the work we do on it from the time it is threshed," concluded Mr. Stauffacher.

"You've certainly made your head save your heels in fine shape," I answered admiringly. "This is the sort of planning that brings to farm operations some of the industrial efficiency that manufacturers have had to learn to meet modern conditions."

Nor did Mr. Stauffacher lay out his plans on paper, then trundle the mill and motor into their places and just leave them there. The installation shows as much care in

(*Continued on page* 13)

Making Farm Life Better

By MRS. RUFUS R. RUNKE
Ruthaven Farm,
Wausau, Wis.

Electrical Equipment Gives Mother More Time to Play with the Kiddies. Mrs. R. R. Runke, Gene Marie, Charlton, and the Twins—Blanche and Ruth.

A SHORT course in rural electrification was recently held at the University of Wisconsin. Among the speakers was one who told a story of electricity in farming which was a revelation to many of those present. This speaker was Mrs. R. R. Runke of the Ruthaven Farm at Wausau, Wis. At Ruthaven, where the highest grade of milk is produced, electricity carries the burden of the work. Not only does it do the drudgery, but through its agency Ruthaven Farm is enabled to place on the market a grade of milk which is unexcelled. The following article by Mrs. Runke, which includes data presented at the Rural Electrification Short Course will prove of great interest to dairy farmers throughout the country.

I like to think of electricity not in terms of horse power,—that doesn't mean anything to me as long as the work gets done, nor in man power, for the men don't usually help out much around the house, but in woman power.

During the five years we have been on this farm we have been without service just half an hour one Sunday, and then we were warned before hand. That is why we look upon electricity as a dependable power, and one of the reasons why we use it so freely.

Of course we light our houses, ours and the tenant house, electrically.

And we pump water with it, too. A ½ h.p. motor pumps water to the barns from a shallow well; a 1 h.p. motor supplies the house from a deep well, 120 feet. Our house water system provides both hot and cold water to the kitchen and two bathrooms.

When we came to Ruthaven we brought a washing machine, a vacuum cleaner and a flat iron. Now we have an electric range, an ironer, an emery wheel for sharpening knives, and a 5 h.p. farm chore motor; also a separator, bottle washer and a soldering iron.

Motor Drives Saw

Like all northern Wisconsin farmers, we have a wood lot. Getting in our winter's wood just meant cutting it and hauling it home. But we got an electric range just the same.

My range is a combination wood and electric. There are water coils in the wood burning box to heat water when the furnace is not going. This supplies us with hot

water for everything but the laundry. We have a little laundry stove for that.

I find that there are many ways of conserving fuel when I cook with electricity. First of all I use the oven a good deal; that saves current. Then I use a pressure cooker for a good deal of my surface cooking. A roast that would take three hours in the oven will cook in 45 minutes in my pressure cooker.

I cook it at 15 lbs. pressure. I find that I can get my cooker up to this pressure by running my burner on high for 12 minutes, and keep it there with the burner on low. Ten minutes before the time for the meat to come out, I turn the current off entirely.

Not Costly

I bake twenty loaves of bread a week but I find I have to fill the oven only twice to get a batch of bread baked.

Even with all this baking our bills are not high. Last September we used the most we ever have, 152 kw. hrs. That month I had threshers for two days, and silo fillers for three days to cook for, and I did considerable canning besides.

What impresses me most about my electric range is its dependability. It is efficient and clean. I use it for Belgian pies, German Kaffee Kuchen, and American bread with equal success.

It frees me from constant attendance on the stove, too.

We have breakfast at 7:30 after my husband comes back from taking the milk to town. Immediately after breakfast I get dinner. Then I set the time and temperature control of my stove, tuck the food inside the oven, and my morning is free for any kind of work.

Electricity is just as much help in the laundry as in the kitchen. I am particularly fond of my electric ironer. I plan my sewing so I can run my children's clothes all through it. That cuts down the ironing time a good deal.

Our average washing is about 20 lbs. of clothes. I can iron that in three hours, and at a current cost of 7½c. Last year we had a separate meter on that ironing machine, and we found that it took just 86 kr. hrs. to do thirty ironings.

We can't be conservative in our enthusiasm for electricity. It is doing so much for all of us. We feel that a single doctor bill resulting in over-work might cost us more than a good labor saving appliance.

Success is never adequately measured in dollars and cents. Prosperity is a state of mind rather than of finances. Contentment makes us prosperous. And our electrified farm is a contented farm.

The Entrance to "Ruthaven"—Electrically Lighted

Spray Residue Removed From Apples by Electric Method

By J. C. SCOTT

BECAUSE apple growers are determined to put out a better product, electricity is being assigned another important function on the farm,—that is, removing spray residue from apples.

After considerable experimenting, it has been found that spray residue can best be removed from apples by passing them under a spray of warm, hydrochloric acid solution, of about 2 per cent in strength, according to Mr. H. C. Diehl, of the U. S. Department of Agriculture, in charge of maturity, handling, storage and transportation investigations of apples in the Northwest.

Keeps Acid Solution Warm

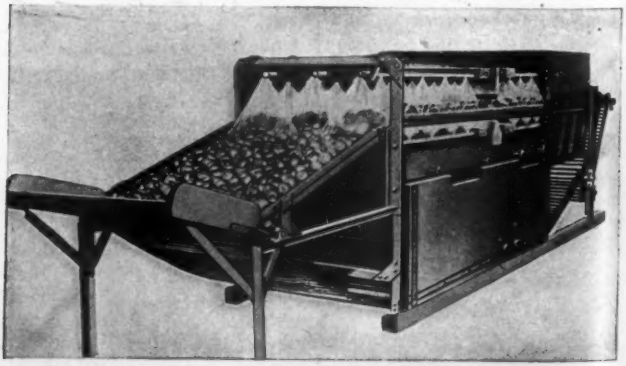
"For the acid solution to be as effective as it should be," says Mr. Diehl, "it should be kept warm. A temperature of 100° F. has proven most satisfactory. In fact, it is not worth while to warm the solution unless it is brought to a temperature of about 100 degrees.

"This treatment is not a dipping process. The apples are simply subjected to the spray for 40 to 50 seconds and dried immediately.

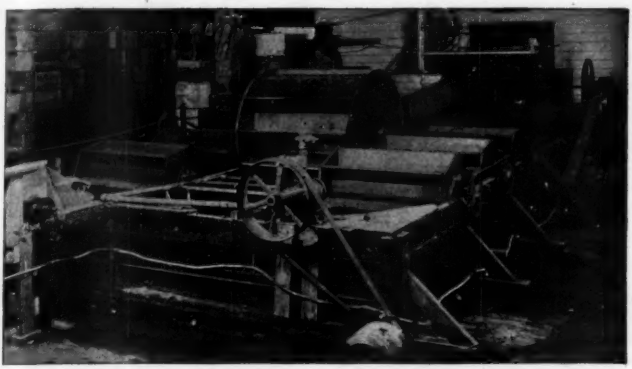
"We can find no ill effects on the keeping qualities of the apples on account of this treatment, although we have many apples in storage this June which were washed last fall."

Electricity functions in two ways in connection with this method of washing apples. First, the heating of the solution is done by electricity; and, second, the machinery, including pressure pump for the spray and apparatus for drying, is run by an electric motor.

Because the vats are constructed



Removing Spray Residue from Apples by Means of Washers Operated by Electric Motors.



Complete Apparatus Used in Removing Spray Residue from Apples. Vat Below Contains the Solution, Which Is Kept Warm to 100° F. by Electric Insert Heaters. The Apples Are Carried Through the Spray and Kept Revolving During Their Journey.

of wood, electric heat is most practicable.

With the 200 gallon vats, used in the large packing sheds, insert heaters of 15 kilowatts capacity are required. In a 75 gallon vat, 7½ kilowatts are sufficient.

The acid solution is weak enough so that it seems to have practically no effect on the insert heater if covered with copper.

Grinding Made Easy

(*Continued from page 9*)

the details of its set-up as it does in its ingenious arrangement.

These hammer mills run at a tremendous speed, so he has bolted the mill firmly to the concrete floor to keep it from vibrating. The belt will not transmit full power and maintain steady speed if the mill is shaking around.

To secure perfect belt alignment, he has cut two shallow, straight-sided channels in the concrete. They are spaced as far apart as the wheels of the truck and each is as wide as the tires. When he pushes the truck into these two channels, the motor pulley is exactly in line with the pulley of the mill, and the pull of the belt cannot twist the motor around. The channels are long enough to allow a few inches of movement forward or back, depending on the length of the belt.

He keeps the motor in place and the belt tight with a 2 x 6 brace. One end of it rests against the base of the mill; the other pushes on the frame of the truck.

The chute that carries the grain to the mill has to reach below the level of the hopper top. Otherwise it would let the grain pour down, heap up, and overflow. By extending into the hopper, the spout is completely blocked before any grain is spilled.

Screens Easy to Reach

But the top half of the mill carrying the hopper must be turned back on its hinges to give access to the screens which are changed for various kinds of grinding.

This means that the last section of the spout, the part that reaches down into the hopper must be moveable so that the mill can be opened.

"The lower part of my spout is an ordinary grain sack, you see," said Mr. Stauffacher. "I just ripped the bottom open and I have a good strong tube. The hopper will

(*Continued on page 21*)

A Guide to Good Farm Lighting

By W. C. BROWN and M. S. MEAKER
Engineering Department, National Lamp Works of General Electric Company

DURING the winter months the morning and evening work in the dairy barn was once doubly hard because of the lack of light. With electric light, however, the feeding, milking, and cleaning are made much easier, and working conditions are better than ever before. In the modern dairy we find many contrivances to make the stock comfortable and to keep them healthy—and it is the opinion of many dairymen that under adequate light the cows eat and drink more and therefore give more milk.

Most dairy barns have low ceilings which make it difficult to get light to all points without using a considerable number of lamps. To some extent, this difficulty is offset by the usual liberal application of white paint or whitewash on the walls and ceiling, which greatly increases the illumination, distributes the light more uniformly, and softens shadows.

A good installation for the dairy barn consists of a row of RLM reflectors with 100-watt inside-frosted Mazda lamps spaced 20 to 30 feet apart over each feeding alley, and over each cleaning alley another row with the same spacing. The reflectors should be mounted as close as possible to the ceiling and those over cleaning alleys staggered with those over feeding alleys. Fairly satisfactory lighting is obtained with 50-watt or 60-watt inside frosted Mazda lamps in reflectors spaced 20 to 30 feet apart. In a dairy barn with a smooth white ceiling that is kept clean, the reflectors may be omitted. Where the ceilings are dark or where there are dark beams, however, it would not be economical to leave off the reflectors because so much of the upward light would be absorbed and wasted.

Pull switches, controlling individual lamps or rows of lamps, permit economy in the use of the lighting system. The entire area need not be lighted at one time, yet light is quickly available at any point.

Milk House

The small cooling and separator house with low ceiling requires but a single 50-watt or 60 watt inside-

> "With electric light the feeding, milking and cleaning are made much easier. . . . It is the opinion of many dairymen that under adequate light the cows eat and drink more and therefore give more milk."

Upper: Good Lighting for the Dairy Barn—100-Watt Inside-Frosted Lamps in RLM Reflectors Spaced About 20 Feet Apart.

Lower: The Separator Room Shown Here Is Lighted by a 60-Watt Lamp in an RLM Reflector

frosted lamp mounted at the center of the ceiling. Even with a smooth ceiling, a reflector improves the illumination, and where there are rafters above, a reflector should always be used.

In the bottling room of the dairy farm, ample light is needed so that the work may be done efficiently and thoroughly. Cleanliness here is essential, and this is furthered by more light. Good results are obtained with RLM reflectors and 60-watt or 100-watt inside-frosted lamps, mounted close to the ceiling and spaced about 10 feet apart each way. Sharp shadows make such operations as bottle-cleaning very difficult; for that reason the use of bare lamps without reflectors should be avoided in the bottling room.

Silo and Chute

Where the silo chute is enclosed, or where there is a built-in space between silo and barn, the chute and silo are often poorly lighted. There is bound to be plenty of danger here, but light shows up the rotted step on the ladder, the sharp splinter, or the rusty nail, and the possibility of a fall is greatly lessened. When ensilage is taken out during dark hours, light must, of course, be provided. Good lighting spells safety, and makes for convenience and freedom of movement.

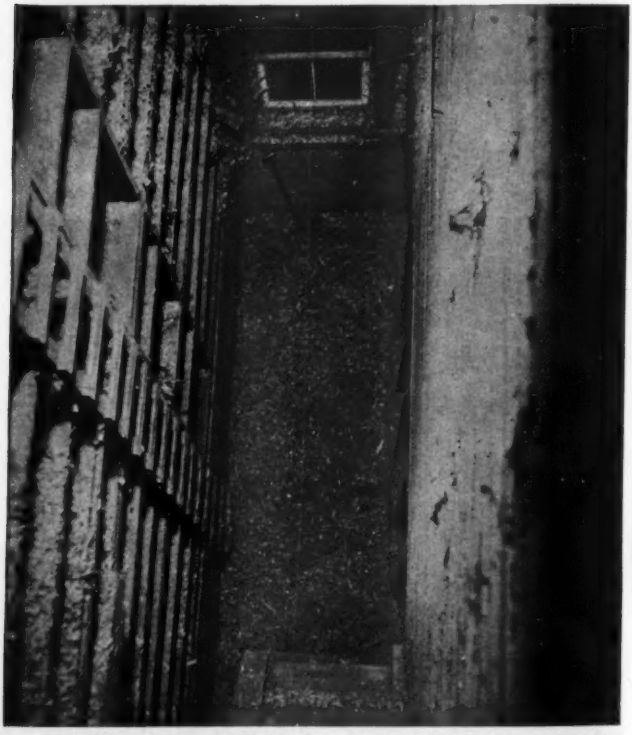


Fig. 3. Looking Down Into the Silo Chute, Lighted by a 100-Watt Inside-Frosted Lamp in a RLM Reflector. The Reflector May Be Pulled Through One of the Silo Doors to Light the Silo.

Fig. 4. If a Reel Is Provided, the Lighting Unit May Be Lowered or Pulled Inside the Silo as Desired.

A 60-watt or 100-watt inside-frosted Mazda lamp mounted in an RLM or angle reflector near the top of the silo, over the chute or space between silo and barn, and so located that it will direct some light within the silo through the open doors, lessens the danger of a fall and greatly facilitates the handling of ensilage.

If the lighting unit is mounted on a reel, so that it may be pulled down, it is a simple matter to lower it inside the silo when the latter is being filled. In this case the wire should have the tough rubber outer insulation now in general use for portable service, to minimize fraying and possibility of short circuit.

The next article of this series will discuss the lighting of the hay barn, horse barn and stalls, granary, beef cattle barn, and sheep barn.

The Cure

"Harry dear, I have been dreadfully insulted by your mother," sobbed a young wife to her husband.

"My mother, Flora? Nonsense! She's miles away."

"I'll tell you about it," she said, "A letter came for you this morning addressed in your mother's handwriting, so I—I opened it."

"I understand, but where does the insult come in?"

"In the postscript," answered she, "It said: Dear Flora, "Don't fail to give this letter to Harry."

The Button on the Wall

By Mrs. Elmer Lewis,
R. R., Deerfield, Mich.

We thought our home was very dear,
And good enough for me,
With oily lamps and smoky stoves
And corners dark to see.
I washed lamp chimneys every day,
And filled the lanterns, too,
John carried coal and wood to burn,
There was a heap to do.
We pumped the water from the well
For all the stock to drink,
And carried water for the wash,
And for the kitchen sink.
I used an ancient wooden tub,
And rubbed the clothes by hand,
And weekly polished up the irons
With salt or scouring sand.
Thus, weary of the toil of life
Did John and I become;
The sweeping almost broke my back,
The pumping crippled John.
But, now, we're all electrified,
From chickencoop to churn;
The house is wired, the barn is light,
The pumps by faucets turn.
I clean my rugs and curl my hair,
And separate the cream,
No wood, or coal, or oil I burn,
Yet, cooking is supreme.
John clips his hair, and shears the sheep,
And fills the silo, tall;
He grinds his tools, and smiles to touch
The button on the wall.

The Cow Barn. (Mr. Barker Stands on the Left.)

A Modern Dairy Farm

How it saves labor and assures clean milk.

By F. LA T. BUDGETT

ALONG the shore of Lake Champlain, in the north-eastern corner of New York State, some very up-to-date and prosperous farmers are to be found. Well-known among them is Mr. E. B. Barker of Sugar Hill, Crown Point, who was quick to put electricity to work for him when the line came his way.

"I Need My Lights Most"

Like most farmers the thing he feels he would miss most, if he had to give up his electric service, would be lights in his cow barns for milking and feeding in the dark winter days. Next to these would come his milking machine, which with its 1 h.p. motor takes care of 20 to 25 cows as often as milking time comes round. At one time Mr. Barker used a cream separator, making the job easy with a small motor. But times have changed, and he now sells whole milk, so that the separator has been put out of business.

The Electric Milk Cooler

In recent years the cost of putting in ice to care for the daily cooling of milk through the warm months has risen higher and higher, until in many cases it is almost out of the question. Yet all the time the regulations of City Departments of Health on cooling have been getting more and more severe. The electric milk cooling outfit is a good way out of the problem, and Mr. Barker was the first in his district to install one. An electric refrigerating machine of household type is connected to coils which cool the water in a concrete tank, the walls of which contain a layer of corkboard to keep the ground heat from leaking in. The cans of milk placed in the tank can be cooled in an hour or two to the required degree. For dairies producing up to 10 ten-gallon cans per day (Mr. Barker generally has 6) this type of outfit is considered to be cheaper, and easier to keep sterile, than a surface cooler and dry cold storage.

The Dairy Sterilizer

Another device to be found in the milk room is the result of

the efforts of Mr. C. H. Churchill, Manager of the local Power Company, and one of the pioneers in rural electrification experiments, to solve the problem of sterilizing the milk utensils on the spot, with real hot water which will really kill the germs. The usual kettle of water brought from the house is frequently not hot enough to be of any use by the time it is used, and no efficient and reasonably priced equipment seemed to be on the market, at any rate in the Eastern States.

The outfit is made up of a 10 gallon round Ford gas tank, put inside an old kitchen hot water tank cut short at one end, the space between them being

The Electric Milk Cooling Outfit. On the Right is the Insulated Concrete Tank, with the Top of the Cooling Coils Showing. On the Left, Part of the Refrigerating Machine.

packed with mineral wool, a good heat retainer. In the 10 gallon tank is mounted a Hotpoint 2,000 watt immersion heater, and below there is a faucet for drawing off the hot water. The water is pumped in through a funnel on the top. The whole outfit is fixed on the wall above the sink. About an hour before the water is wanted, the current is switched on, and by the time milking is over 5 or 6 gallons of scalding water are ready for use. This simple arrangement makes sure that the water is really hot when used, and saves many steps for the barn is some distance from the house.

Mr. Barker raises a good many head of young stock, and

The Dairy Water Heater

is planning to extend wires to his calf barn so as to have the help of electric light for looking after these as well.

The electrical needs of the home have not been lost sight of, for it boasts an Easy washing machine, an Electric Iron and a Toaster.

How Much Current Does It Take

And now a word as to the current used. During October

The Milk House and Its Owner.

and November last, the electricity used, calculated for a 30

day period, averaged as follows:

	Kw-hr.
Lights, both house and barn, including Washing Machine, Iron & Toaster	66
Milking Machine	40
Water Heater for Sterilizing	83

The milk cooler was only run for a few days after installation before cold weather made it unnecessary, so that monthly figures are not available.

When the number of services provided here are considered, the milking machine and dairy water heater being of course in daily use, the cost of running seems quite reasonable, at least, Mr. Barker thinks so.

Grinding Made Easy

(*Continued from page* 13)

just clear the stationary wooden part when I open the mill."

This is entirely satisfactory when the spout is short and nearly vertical. But when it is impossible to set the mill directly under the grain bins, and the spout must enter at a rather flat slope, it is better to provide a telescoping section.

This sliding section should fit smoothly outside of the stationary spout and should be long enough so that the two parts overlap a foot or more when it is in place over the hopper. When the mill is to be opened, this section slips up out of the way. It is not so satisfactory when placed inside the upper section.

Electric Range Not a Luxury

By R. E. PIERCE

LOW power rates, now available in most communities for electricity used in the operation of motors and heating appliances in the home, place within reach of the consumer in nearly every rural community the much misunderstood appliance, the electric range.

Probably no electric appliance has been so misunderstood or has had such tardy attention as the electric range. There is not a sec-

It Is a Justifiably Happy Event When the Electric Range Enters the Farm Home.

tion of the country where this appliance should be used more universally than in the rural sections. First, coal is usually difficult to get. Second, gas is usually not supplied there due to the expense of distribution. Without coal and gas to reckon with, the electric range has an almost open field. Electric cooking is usually considered to be slower than when cooking with fuels. This is because the heat is limited to the definite amount set by the switch; however, it results in using less heat and usually better preparation of the food. When the range is equipped with a large heating unit this objection is materially reduced.

Cooking in the summertime is a real pleasure with an electric range, for the stifling heat produced by the old coal or wood stove when in full blast has been practically eliminated.

For broiling and roasting it is hard to beat the electric range. Electric ovens are particularly adapted to boiling meats. The real economy of this method of cooking lies in the fact that there is no coal or wood to handle, no ashes to remove, no fire to tend, no dirt, no smoke, no gas or oil burners to repair or renew and no uncertainty as to the cooking results.

He Pumps the Milk to the Pigs

By JOHN G. KAISER

A UNIQUE use of electric power can be found on the John Miller farm north of Fairwater, Wisconsin. Mr. Miller has a large dairy farm and under present labor conditions is trying to get along with the least amount of hired help. One of the minor tasks, which in his case took considerable time, was carrying the skim milk to the hog pens.

Mr. Miller has a shallow well beneath his separator room in which is installed a centrifugal pump with a small electric motor for pumping water into the stock storage tank in the hay mow. This same pipe also runs out to the hog houses 175 feet away with several taps along the line to supply water for the hogs and for mixing their feed. In order to avoid carrying a large barrel full of skim milk

(*Continued on page 25*)

Here Is the Skim Milk Tank and the Pump That Does the Work.

Electrical Housekeeping

Conducted by VERA B. MEACHAM

When You Shop for a Washing Machine

WHEN I began to look up electric washing machines, I found right at the first that any reliable machine will wash clothes clean.

That's the most important thing about it, of course. But it is not the only thing. The way it does it, the help it needs, and the care it is going to demand come in for their share of attention from every housewife.

You don't just walk up to a row of washing machines and say, "Eenie Meenie Miny Mo. Send that one, please."

Not if you are a good shopper. The Home Economics Division of Iowa State College thinks this matter of modern household equipment so important that they have a special course for its study. They analyze the jobs and machines together and help the inquiring housewife discover just what to expect of the machinery she buys.

I learned how different washing machines really work at their Home Equipment Short Course last winter.

Did you know that some of them clean the clothes by sloshing the water through them, others by puddling the clothes about in the water, and still others by doing both at once? In general the oscillator moves the water; the cylinder and the dolly, the clothes; the vacuum cup moves the water and the clothes a little; the gyrator moves the clothes and sometimes splashes the water back and forth, too.

I can hear some of you demanding already,

"Yes, but which is the best?"

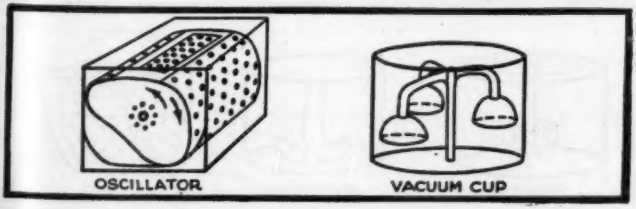
I can hear you ask it because that is just what I asked at Ames. But I knew even as I asked it that there was no answer to that question. Each kind fits somebody's needs and desires best.

The gyrator and the dolly are the most violent in their action and will wash dirty clothes in less time than the others. The oscillating and cylinder types are the most gentle; the vacuum cup machine comes in between.

Washers have widely differing capacities, but the average machine, usually rated at six sheets or nine pounds, will handle the ordinary washing of the family of four in three or four loads according to the reports of Good Housekeeping Institute.

The material of the tub itself is almost as important as its capacity. It must be durable, rust proof and easy to clean. Good Housekeeping warns against using galvanized tubs in sections where the water is very hard.

You can fill any machine with



a hose attached to your water faucet, but emptying it is another matter. You want to know that the drain to carry off the water is easy to reach, large enough to empty the tub quickly, and that you can screw the hose onto it yourself.

There is not much to investigate in a good electric motor. You can make sure, however, that it is large enough to run both tubs at once if it is a two tub machine, and that it will turn the wringer and run the washer at the same time. The motor should be set so there are no moving parts exposed to catch prying little fingers,—and it should be insulated from the machine.

The extension cord should be moisture proof. A thick, smooth rubber covering is excellent.

Wringers differ, too, on these new machines. The most important thing about any of them is its safety device. It should be in reach from all angles wherever you are standing. It must work easily and quickly. It is well to make sure that the space between the rolls is wide enough for you to pull out anything that starts through the wrong way. Grease packed bearings make oiling the wringer unnecessary. That does away with the danger of spattering drops of oil on freshly washed clothes.

The new wringers are frequently made with large rolls of soft rubber. Sometimes one roll is soft and the other hard. Soft rolls wring the clothes out dryer than the hard ones, and they take off fewer buttons.

Then there are the spinners or extractors to consider. They whirl the clothes dry instead of wringing them.

"It takes a good many women three or four days to dry clothes in winter," says one of the instructors at Iowa State College. "If she can whirl them so dry in one of these spinners that no water drops out, they won't freeze, and they won't drip so much if they must be hung up in the house."

Spinning the clothes for ten minutes makes them pretty dry. The linen is about ready to iron.

Handsome is as handsome does in any electric washer, but that is no reason for forgetting that it is going to be a piece of furniture, too. If it is to be stowed away in some basement laundry, its appearance really makes very little difference, but if it is going to stay in the kitchen, a little beauty won't hurt its performance any.

Bean Porridge Hot

"Bean porridge hot——
by all means. But
"Bean porridge cold——"
or
"Bean porridge in the pot nine days old" isn't just the best sort of lunch for John Henry and Dorothy Ann to learn their multiplication tables on.

That is why Mother's Clubs and Parent-Teachers' Associations have been so busy these last years working up various schemes for providing them with something hot at noon.

In several schools in our neighborhood the school board provides each child with a half pint jar for his own use. Every morning the mothers fill those jars with

Will They Be Hungry At Noon?

soup, or creamed vegetables, or meat, something she knows the children will eat at noon. And in spite of our theories about children's eating, we know that on the days the teacher fixed up a toothsome lamb stew, somebody's Tommy turned up his nose at it and ate his lunch dry, and that on tomato soup day Susy sulked and said,

"I don't like that."

With this new method each child brings his own lunch and packs it away with the others in the large container that easily holds a couple of dozen uniform jars. At recess time some one puts a little water in the kettle and sets it on the stove, coal burner, oil stove, or if the school is under a power line, a two or three burner hot plate.

Last winter I stopped in at such a school to take some pictures. The teacher had put the two covered kettles on the burners in the morning, and while I was talking to her at recess time, she called a little six year old and sent him proudly downstairs to turn the current on.

At noon one of the children passed paper napkins, another straws for the milk all the children brought. Then the kettles came up and everyone opened his jar, piping hot and steaming with appetizing smells.

They ate their lunches, every crumb. They had to sit there until the lunch period was over, and since they couldn't rush out doors to plunge into play, sandwich in hand, whooping and yelling between bites, they put all their attention into making a good job of eating while they were at it.

He Pumps the Milk to the Pigs

(*Continued from page 22*)

this distance twice a day, Mr. Miller bought two valves and picked up a piece of pipe and short piece of hose on the farm and connected these to the centrifugal pump. Now while separating, Mr. Miller shuts off the connections to the well and to the water tank. He opens the other valve, starts the pump and lets the motor pump the skim milk directly to the pens where it is fed. The use of such a pump for this purpose alone would be well worth while. Mr. Miller says, "The price of the two valves and the little time necessary to install, is saving me a great deal of time in doing my chores."

NEW BULLETINS AVAILABLE

Water where you want it and how to get it is explained in a folder published by The John Lauson Mfg. Co., New Holstein, Wis.

"Electric Light on the Farm" is the name of an informative bulletin published by the Edison Lamp Works, General Electric Co., Harrison, N. J.

"The Range That 'Gets Meals' All By Itself" is the name of an interesting folder published by the Westinghouse Elec. & Mfg. Co., East Pittsburg, Pa.

Using Electric Groomer for Cleaning the Dairy Cows on the Purdue University Dairy Farm at Lafayette, Indiana.

Vacuum Cleaning the Dairy Herd

INDEXED

By J. H. HILTON
Assistant Professor in Dairying,
Purdue University

IN order to determine the practicability of electric vacuum grooming machines in dairy herds, the Dairy Department of Purdue University used one of these machines in their herd for a year and a half. This machine was compared with hand grooming on the basis of time saved, costs, condition of hide and hair, and general physical condition of the animals used in the trials. At first an attempt was made to study the effect on milk production, but it was found that there were so many other factors entering in which tended to affect production, that it was impossible to draw any definite conclusions on this phase of the work.

The following table gives a brief summary of the time required and the costs of the two methods of grooming:

The hides of the animals and the coats of hair seemed to be in better condition when the machine was used. This was undoubtedly due to the fact that the cows were kept much cleaner with the machine and the pores in the skin were undoubtedly kept more open.

With the additional costs of only .09 per day for power, the ease of grooming the cows with

	No. cows	Time required	Average time per cow	Labor cost*	Power costs of machine		Total cost	Average cost per head
				Cts.	*K.W.H.*	*Cost*	*Cts.*	*Cts.*
Machine groomed...	44	1:40	2.2 minutes	52.5	1.35	$.09	61.5	1.4
Hand groomed.....	44	1:44	2.3 minutes	54.5	.....	....	54.5	1.23

the machine, the keeping of hides in better shade and keeping the animal much cleaner, it was concluded by those in charge of these comparisons that the electric currying machine was practical in large dairy herds, especially where market milk is produced.

Making Ironing Easier

How many women realize, that, in doing an average family ironing, they lift more than a ton of weight? True, it is only six pounds at a time, but it amounts to more than a ton.

Heat and pressure are the two essential factors for good ironing and the ironing machine has approximately 50% more heating efficiency and much more pressure than can possibly be obtained with a hand iron.

The cost of operation does not exceed that of the hand iron, for, while it does cost twice as much per hour to operate, the ironing is done in from one-third to one-half the time, thereby making the cost practically the same.

Many people think of an ironing machine as useful only on sheets, table cloths, etc., in other words, flat work. Not so, however, with this late type machine. These little helpers have what is termed an "open end" which enables the operator to iron many things besides flat work. In fact, it is safe to say that 97% of the family ironing is successfully done, shirts, house dresses, ruffled curtains, overalls, coveralls, yes, and even hubby's "Sunday Go-To-Meetin'" trousers can be pressed on it—MYRTLE PRATT, MINNEAPOLIS, MINN.

There Is a Tide in the Affairs of Men

From the Bloomington (Ind.) *Star:* "Jim Slivers has been taking New Life Restorer pills, and has written a testimony to the company. They wrote back and asked for his picture to print, and now Jim is so all-fired swelled up over it that he says he will run for Justice of the Peace."

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What is Your Title for the Cover?

ELECTRICITY ON THE FARM offers a $25.00 cash prize for the best title for the picture shown on the cover of this issue (September).

RULES OF CONTEST

1. Contest closes October 5.

2. Contestant must be a farmer or a member of his family *living on the farm.*

3. More than one title may be submitted.

4. In case of a tie, each winning contestant will receive $25.00.

5. Print plainly your name and address, and send your suggestion to Title Editor, ELECTRICITY ON THE FARM, 225 West 34th Street, New York, N. Y.

6. The winner for September will be announced in ELECTRICITY ON THE FARM for November.

Readers submitting titles are requested to include a brief outline of the use made of electric current on their farms.

Here's the Winning Cover Title for July

> **"Electricity Showers Blessings on the Farm"**
> **Sent in by Miss Emma C. Johnson, Clarks Grove, Minn.**

Honorable Mention

Among those submitting titles the following deserve honorable mention for their contributions, and we hope all listed below as well as those not listed will try their hand at suggesting titles for future covers of ELECTRICITY ON THE FARM:

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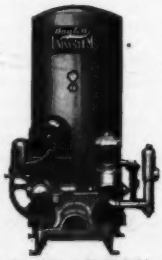

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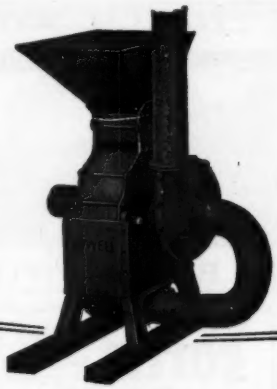

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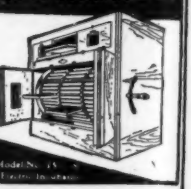

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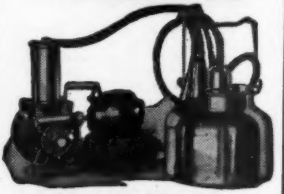
Fords Milker $100 Single Unit Complete



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Farmer (who had visited banks); "No, that's the first vice-president in charge of cows."

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"Does an incubator chicken love its mother?"

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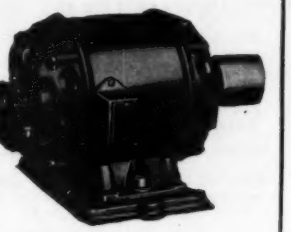

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Milking Machine practice is fully covered in bulletin No. 74, to be obtained from the Myers-Sherman Co., 213 No. Desplaine St., Chicago, Ill.

"Water in Abundance" is the title of a very attractive booklet describing the various types of Myers Water Systems. Write for catalog WS-29 to F. E. Myers & Bro. Co., Ashland, Ohio.

"The New Electric Whip-it Feed Mill" is the title of a folder on feed grinding which you can secure from the I. B. Rowell Co., at Waukesha, Wis.

Portable Electric Clipping and Grooming Machines are fully described in a booklet published by and available from the Gillette Clipping Machine Co., Inc., 129 W. 31st St., N. Y. C.

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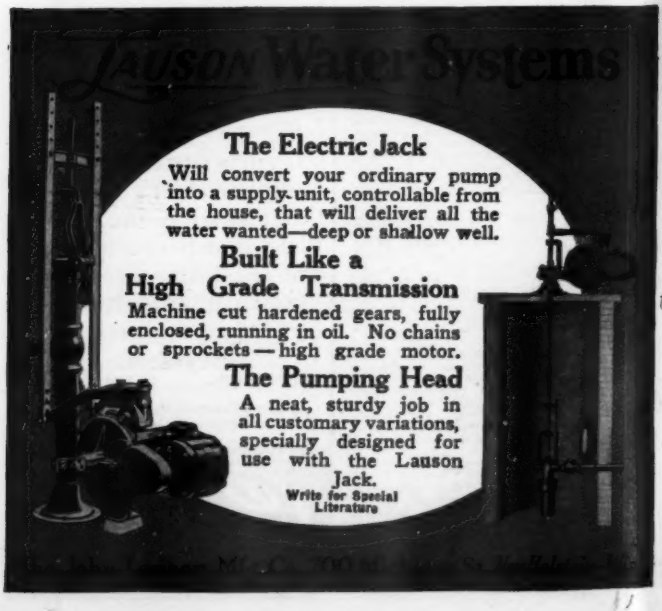
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